

STATINTL

October 29, 1963

High Resolution Screen

(Potential Proposal)

[redacted] reoriented their proposal toward development of an improved high ~~res~~ resolution high intensity screen, and resubmitted it on Sept. 20.

The screen they propose is new and is their proprietary concept. They coat a transparent phosphor onto glass or other substrate and excite it with ultraviolet light. The phosphor fluoresces with visible light forming a visible image on the otherwise transparent screen.

On [redacted] last visit they demonstrated high resolution by projecting a resolution target onto the a coated a sample. The USAF 3-bar target was reduced about 8 diameters, and with a microscope we were able to see about 70 lines/mm on the screen. The coating was perfectly transparent to visible light.

Later they made the same a demonstration for me but with a step wedge and about 4 diameters enlargement projection. The gray scale rendition of the fluorescing image was excellent. No measurements were made but subjectively it had the same appearance as a step wedge on a light table. They also projected a continuous tone photograph of a TV screen. The tonal rendition was readily apparent.

The demonstration of resolution and gray scale rendition was very successful. There was no attempt made to demonstrate high intensity. They were using a 100 watt mercury arc lamp and a lens at about f/4. We were able to count 11 steps of the 21 step wedge. A higher power lamp and quartz elements in the lens to improve ultraviolet transmission would undoubtedly permit seeing through denser portions of the wedge. Such a demonstration would have to wait for implementation of a contract.

New Subject. [redacted] is working on films. They will be glad to discuss their work with [redacted]. Apparently the only man authorized to discuss their proprietary work is the Lab Director, [redacted] VP Research. Georges visit would have to be scheduled with [redacted].

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